

SEQUENCE LISTING

<110> Gestion Univalor
BRISSON, Normand
DESVEAUX, Darrell
SUBRAMANIAM, Raiagopal
SYGUSCH, Jurgun

<120> PLANT TRANSCRIPTIONAL ACTIVATOR AND USES
THEREOF

<130> 10662-121PCT

<150> US 60/479,871

<151> 2003-06-20

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 274

<212> PRT

<213> Artificial Sequence

<220>

<223> potato StWhy1 protein sequence

<400> 1

Met	Ser	Asn	Phe	Ser	Leu	Ser	Pro	Ser	Pro	Thr	Ser	Gly	Phe	Ser	Leu
1				5					10					15	
Asn	Leu	Gln	Asn	Pro	Thr	Lys	Thr	Ser	Tyr	Leu	Ser	Phe	Ser	Ser	Ser
			20					25						30	
Ile	Asn	Thr	Ile	Phe	Ala	Pro	Leu	Ser	Ser	Asn	Thr	Thr	Lys	Ser	Phe
			35					40						45	
Ser	Gly	Leu	Thr	His	Lys	Ala	Ala	Leu	Pro	Arg	Asn	Leu	Ser	Leu	Thr
			50					55						60	
Cys	Arg	His	Ser	Asp	Tyr	Phe	Glu	Pro	Gln	Gln	Gln	Gln	Gln	Gln	Gln

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65          70          75          80
Gln Gln Gln Pro Gln Gly Ala Ser Thr Pro Lys Val Phe Val Gly Tyr
          85          90          95
Ser Ile Tyr Lys Gly Lys Ala Ala Leu Thr Val Glu Pro Arg Ser Pro
          100          105          110
Glu Phe Ser Pro Leu Asp Ser Gly Ala Phe Lys Leu Ser Arg Glu Gly
          115          120          125
Met Val Met Leu Gln Phe Ala Pro Ala Ala Gly Val Arg Gln Tyr Asp
          130          135          140
Trp Ser Arg Lys Gln Val Phe Ser Leu Ser Val Thr Glu Ile Gly Ser
          145          150          155          160
Ile Ile Ser Leu Gly Ala Lys Asp Ser Cys Glu Phe Phe His Asp Pro
          165          170          175
Asn Lys Gly Arg Ser Asp Glu Gly Arg Val Arg Lys Val Leu Lys Val
          180          185          190
Glu Pro Leu Pro Asp Gly Ser Gly His Phe Phe Asn Leu Ser Val Gln
          195          200          205
Asn Lys Leu Ile Asn Leu Asp Glu Asn Ile Tyr Ile Pro Val Thr Lys
          210          215          220
Ala Glu Phe Ala Val Leu Val Ser Ala Phe Asn Phe Val Met Pro Tyr
          225          230          235          240
Leu Leu Gly Trp His Thr Ala Val Asn Ser Phe Lys Pro Glu Asp Ala
          245          250          255
Ser Arg Ser Asn Asn Ala Asn Pro Arg Ser Gly Ala Glu Leu Glu Trp
          260          265          270
Asn Arg

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<210> 2

<211> 263

<212> PRT

<213> Artificial Sequence

<220>

<223> Arabidopsis Whirly proteins AtWhy1

<400> 2

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Met Ser Gln Leu Leu Ser Thr Pro Leu Met Ala Val Asn Ser Asn Pro

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3/6

1	5	10	15
Arg Phe Leu Ser Ser Ser Ser Val Leu Val Thr Gly Gly Phe Ala Val			
20	25	30	
Lys Arg His Gly Phe Ala Leu Lys Pro Thr Thr Lys Thr Val Lys Leu			
35	40	45	
Phe Ser Val Lys Ser Arg Gln Thr Asp Tyr Phe Glu Lys Gln Arg Phe			
50	55	60	
Gly Asp Ser Ser Ser Ser Pro Ser Pro Ala Glu Gly Leu Pro Ala Arg			
65	70	75	80
Phe Tyr Val Gly His Ser Ile Tyr Lys Gly Lys Ala Ala Leu Thr Val			
85	90	95	
Asp Pro Arg Ala Pro Glu Phe Val Ala Leu Asp Ser Gly Ala Phe Lys			
100	105	110	
Leu Ser Lys Asp Gly Phe Leu Leu Leu Gln Phe Ala Pro Ser Ala Gly			
115	120	125	
Val Arg Gln Tyr Asp Trp Ser Lys Lys Gln Val Phe Ser Leu Ser Val			
130	135	140	
Thr Glu Ile Gly Thr Leu Val Ser Leu Gly Pro Arg Glu Ser Cys Glu			
145	150	155	160
Phe Phe His Asp Pro Phe Lys Gly Lys Ser Asp Glu Gly Lys Val Arg			
165	170	175	
Lys Val Leu Lys Val Glu Pro Leu Pro Asp Gly Ser Gly His Phe Phe			
180	185	190	
Asn Leu Ser Val Gln Asn Lys Leu Val Asn Val Asp Glu Ser Ile Tyr			
195	200	205	
Ile Pro Ile Thr Arg Ala Glu Phe Ala Val Leu Ile Ser Ala Phe Asn			
210	215	220	
Phe Val Leu Pro Tyr Leu Ile Gly Trp His Ala Phe Ala Asn Ser Ile			
225	230	235	240
Lys Pro Glu Glu Thr Ser Arg Val Asn Asn Ala Ser Pro Asn Tyr Gly			
245	250	255	
Gly Asp Tyr Glu Trp Asn Arg			
260			

<210> 3

<211> 237

<212> PRT

<213> Artificial Sequence

<220>

<223> Arabidopsis Whirly proteins AtWhy2

<400> 3

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Met Lys Gln Ala Arg Ser Leu Leu Ser Arg Ser Leu Cys Asp Gln Ser
 1           5           10           15
Lys Ser Leu Phe Glu Ala Ser Thr Leu Arg Gly Phe Ala Ser Trp Ser
      20           25           30
Asn Ser Ser Thr Pro Gly Arg Gly Phe Pro Gly Lys Asp Ala Ala Lys
      35           40           45
Pro Ser Gly Arg Leu Phe Ala Pro Tyr Ser Ile Phe Lys Gly Lys Ala
      50           55           60
Ala Leu Ser Val Glu Pro Val Leu Pro Ser Phe Thr Glu Ile Asp Ser
      65           70           75           80
Gly Asn Leu Arg Ile Asp Arg Arg Gly Ser Leu Met Met Thr Phe Met
      85           90           95
Pro Ala Ile Gly Glu Arg Lys Tyr Asp Trp Glu Lys Lys Gln Lys Phe
      100          105          110
Ala Leu Ser Pro Thr Glu Val Gly Ser Leu Ile Ser Met Gly Ser Lys
      115          120          125
Asp Ser Ser Glu Phe Phe His Asp Pro Ser Met Lys Ser Ser Asn Ala
      130          135          140
Gly Gln Val Arg Lys Ser Leu Ser Val Lys Pro His Ala Asp Gly Ser
      145          150          155          160
Gly Tyr Phe Ile Ser Leu Ser Val Asn Asn Ser Ile Leu Lys Thr Asn
      165          170          175
Asp Tyr Phe Val Val Pro Val Thr Lys Ala Glu Phe Ala Val Met Lys
      180          185          190
Thr Ala Phe Ser Phe Ala Leu Pro His Ile Met Gly Trp Asn Arg Leu
      195          200          205
Thr Gly His Val Asn Thr Glu Ala Leu Pro Ser Arg Asn Val Ser His
      210          215          220
Leu Lys Thr Glu Pro Gln Leu Glu Leu Glu Trp Asp Lys
      225          230          235

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<210> 4

<211> 267

<212> PRT

<213> Artificial Sequence

<220>

<223> Arabidopsis Whirly proteins AtWhy3

<400> 4

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Met Ser Gln Leu Leu Ser Ser Pro Pro Met Ala Val Phe Ser Lys Thr
  1             5             10             15
Phe Ile Asn His Lys Phe Ser Asp Ala Arg Phe Leu Ser Ser His Ser
      20             25             30
Ile Leu Thr Ser Gly Gly Phe Ala Gly Lys Ile Ile Pro Leu Lys Pro
      35             40             45
Thr Ala Arg Leu Lys Leu Thr Val Lys Ser Arg Gln Ser Asp Tyr Phe
      50             55             60
Glu Lys Gln Arg Phe Gly Asp Ser Ser Ser Ser Gln Asn Ala Glu Val
      65             70             75             80
Ser Ser Pro Arg Phe Tyr Val Gly His Ser Ile Tyr Lys Gly Lys Ala
      85             90             95
Ala Leu Thr Ile Glu Pro Arg Ala Pro Glu Phe Val Ala Leu Glu Ser
      100            105            110
Gly Ala Phe Lys Leu Thr Lys Glu Gly Phe Leu Leu Leu Gln Phe Ala
      115            120            125
Pro Ala Ala Gly Val Arg Gln Tyr Asp Trp Ser Arg Lys Gln Val Phe
      130            135            140
Ser Leu Ser Val Thr Glu Ile Gly Asn Leu Val Ser Leu Gly Pro Arg
      145            150            155            160
Glu Ser Cys Glu Phe Phe His Asp Pro Phe Lys Gly Lys Gly Asp Glu
      165            170            175
Gly Lys Val Arg Lys Val Leu Lys Val Glu Pro Leu Pro Asp Gly Ser
      180            185            190
Gly Arg Phe Phe Asn Leu Ser Val Gln Asn Lys Leu Leu Asn Val Asp
      195            200            205
Glu Ser Val Tyr Ile Pro Ile Thr Lys Ala Glu Phe Ala Val Leu Ile
      210            215            220
Ser Ala Phe Asn Phe Val Leu Pro His Leu Ile Gly Trp Ser Ala Phe
      225            230            235            240
Ala Asn Ser Ile Lys Pro Glu Asp Ser Asn Arg Leu Asn Asn Ala Ser

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245 250 255
Pro Lys Tyr Gly Gly Asp Tyr Glu Trp Ser Arg
260 265